CA45A 型片式固体电解质钽电容器

Type CA45A Chip Solid Electrolytic Tantalum Capacitor

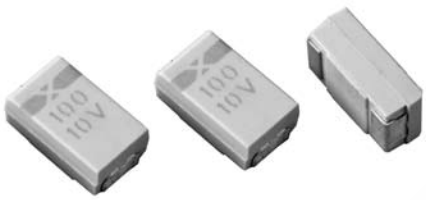
执行标准Executive Standard：Q/MM124A-2009

RoHS COMPLIANT

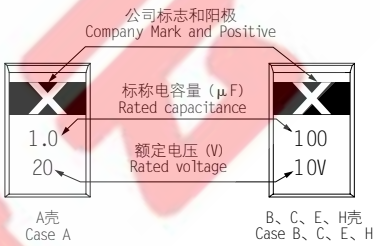
特征与用途 Characteristics and Usage

- 模压封装、密封性好、片式、体积小、重量轻、极性电容器；
- 电性能优良、稳定可靠、**低ESR（等效串联电阻），等效于KEMET公司T491型**；
- 适用于移动通讯、摄像机、程控交换机、计算机、汽车电子等各种电子设备的表面贴装直流或脉动电路。

- ☐ Molded, good sealability, chip, small profile, light weight, polarized capacitor.
- ☐ Good electrical performance, stable and reliable, **low ESR, equivalent to T491 of KEMET.**
- ☐ The product is suitable to surface mounted direct current or pulsating circuit in various electronic equipments for mobile communication, vidicon, program controlled exchanger, computer, and auto electronics.



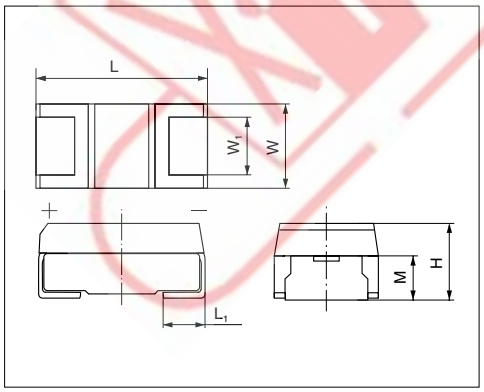
标志 MARKING:



主要技术性能 Main Technical Performance

- 温度范围：-55℃～125℃（>85℃时，施加降额电压使用）；
- 额定电压、降额电压、标称电容量：见表2；
- 电容量允许偏差：±10%、±20%；
- 高低温特性：见表2；
- 外形尺寸及外壳代号：见图1和表1。

- ☐ Temperature range: -55℃~125℃ (when above 85℃, derated voltage is applied)
- ☐ Rated voltage, derated voltage and rated capacitance see Table 2.
- ☐ Capacitance tolerance: ±10%；±20%；
- ☐ Characteristic at low and high temperature: see table 2;
- ☐ Physical dimension and case code: see Figure 1 and table 1.



（产品标志中厂标符号 ▶◀ 所在端对应的贴片为正极）
(The end with ▶◀ is the positive end)

图 1

表1 电容器的外形尺寸 Table 1 Physical dimension

外壳代号 Case code		外形尺寸 mm Physical dimension					
新云 XinYun	EIA	L	W	H	L_1	W_1	M
A	3216-18	3.2±0.2	1.6±0.2	1.6±0.2	0.65±0.2	1.2±0.2	1.0±0.2
B	3528-21	3.4±0.2	2.6±0.2	1.9±0.2	0.70±0.2	2.0±0.2	1.2±0.2
C	6032-28	5.8±0.3	3.2±0.3	2.5±0.3	1.35±0.2	2.2±0.2	1.45±0.2
E (D)*	7343-31	7.3±0.3	4.3±0.3	2.8±0.3	1.35±0.2	3.0±0.2	1.6±0.2
H(E、X)**	7343-43	7.3±0.3	4.3±0.3	4.1±0.3	1.35±0.2	3.0±0.2	1.6±0.2

注Note：*E壳等同于KEMET、VISHAY和AVX公司的D壳产品尺寸；
The dimension of case E is equal to case D of KEMET, VISHAY and AVX .
**H壳等同于KEMET公司的x壳、VISHAY和AVX公司的E壳产品尺寸。
The dimension of case H is equal to case X of KEMET, case E of VISHAY and AVX.

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表2 电容器的额定电压、降额电压、标称电容量、外壳代号、等效串联电阻及高低温特性
Table 2 Rated voltage, derated voltage, rated capacitance, case code, ESR and characteristic at low and high temperature

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**4V**（降额电压**2.5V**）Rated voltage 4V (derated voltage 2.5V)										
3.3	A	8	0.5	5	6.3	±10	±12	8	6	8
4.7	A	6	0.5	5	6.3	±10	±12	8	6	8
6.8	A	6	0.5	5	6.3	±10	±12	8	6	8
10	B	3.5	0.5	5	6.3	±10	±12	8	6	8
10	A	6	0.5	5	6.3	±10	±12	8	6	8
15	B	3.5	0.6	6	7.5	±10	±12	8	6	8
15	A	4	0.6	6	7.5	±10	±12	8	6	8
22	C	1.8	0.9	8.8	11	±10	±12	8	6	8
22	B	3.5	0.9	8.8	11	±10	±12	8	6	8
22	A	4	0.9	8.8	11	±10	±15	8	6	8
33	C	1.8	1.3	13.2	16.5	±10	±12	8	6	8
33	B	2.5	1.3	13.2	16.5	±10	±12	8	6	8
33	A	4	1.3	13.2	16.5	±10	±15	9	6	8
47	C	1	1.9	18.8	23.5	±10	±12	8	6	8
47	B	3	1.9	18.8	23.5	±10	±15	8	6	8
47	A	2.5	1.9	18.8	23.5	±10	±15	15	10	12
68	E	0.8	2.7	27.2	34	±10	±12	8	6	8
68	C	1.2	2.7	27.2	34	±10	±12	8	6	8
68	B	3.5	2.7	27.2	34	±10	±15	8	6	8
68	A	4	2.7	27.2	34	±10	±15	22	15	18
100	E	0.7	4	40	50	±10	±12	10	8	10
100	C	1	4	40	50	±10	±12	10	8	10
100	B	0.9	4	40	50	±10	±15	15	10	12
100	A	4	4	40	50	±10	±15	30	20	24
150	E	0.5	6	60	75	±10	±12	10	8	10
150	C	1	6	60	75	±10	±15	10	8	10
150	B	2	6	60	75	±12	±15	18	12	15
220	E	0.5	8.8	88	110	±10	±12	10	8	10
220	C	1	8.8	88	110	±10	±15	10	8	10
220	B	1.1	8.8	88	110	±10	±15	22	15	18
330	H	0.5	13.2	132	165	±10	±12	12	10	12
330	E	0.5	13.2	132	165	±10	±12	12	10	12
330	C	0.9	13.2	132	165	±10	±15	15	10	12
470	H	0.5	18.8	188	235	±10	±12	12	10	12
470	E	0.5	18.8	188	235	±10	±15	12	10	12
680	H	0.5	27.2	272	340	±10	±15	15	12	15
680	E	0.5	27.2	272	340	±10	±15	21	14	17
1000	H	0.5	40	400	500	±10	±15	21	14	17
额定电压**6.3（6）V**（降额电压**4V**）Rated voltage 6.3(6)V (derated voltage 4V)										
2.2	A	8	0.5	5	6.3	±10	±12	8	6	8
3.3	A	8	0.5	5	6.3	±10	±12	8	6	8
4.7	A	6	0.5	5	6.3	±10	±12	8	6	8

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续表2 Table 2-Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**6.3（6）V**（降额电压**4V**）Rated voltage 6.3(6)V (derated voltage 4V)										
6.8	B	3.5	0.5	5	6.3	±10	±12	8	6	8
6.8	A	6	0.5	5	6.3	±10	±12	8	6	8
10	B	3.5	0.6	6.3	7.9	±10	±12	8	6	8
10	A	4	0.6	6.3	7.9	±10	±12	8	6	8
15	C	1.8	0.9	9.4	11.8	±10	±12	8	6	8
15	B	3.5	0.9	9.4	11.8	±10	±12	8	6	8
15	A	3.5	0.9	9.4	11.8	±10	±15	8	6	8
22	C	1.8	1.4	13.9	17.3	±10	±12	8	6	8
22	B	3.5	1.4	13.9	17.3	±10	±12	8	6	8
22	A	4	1.4	13.9	17.3	±10	±15	8	6	8
33	C	1.8	2.1	20.8	26	±10	±12	8	6	8
33	B	2.5	2.1	20.8	26	±10	±15	8	6	8
33	A	2.5	2.1	20.8	26	±10	±15	15	10	12
47	E	0.8	3	29.6	37	±10	±12	8	6	8
47	C	1	3	29.6	37	±10	±12	8	6	8
47	B	2	3	29.6	37	±10	±15	8	6	8
47	A	3.5	3	29.6	37	±10	±15	18	12	15
68	E	0.8	4.3	42.8	53.5	±10	±12	8	6	8
68	C	1.2	4.3	42.8	53.5	±10	±12	8	6	8
68	B	0.9	4.3	42.8	53.5	±10	±15	12	8	10
100	E	0.7	6.3	63	78.7	±10	±12	10	8	10
100	C	0.9	6.3	63	78.7	±10	±15	10	8	10
100	B	3	6.3	63	78.7	±10	±15	22	15	18
150	E	0.5	9.5	94.5	118	±10	±12	10	8	10
150	C	1	9.5	94.5	118	±10	±15	10	8	10
220	H	0.5	13.9	139	173	±10	±12	10	8	10
220	E	0.5	13.9	139	173	±10	±12	10	8	10
220	C	1.2	13.9	139	173	±10	±15	15	10	12
330	H	0.4	20.8	208	260	±10	±12	12	10	12
330	E	0.4	20.8	208	260	±10	±15	12	10	12
470	H	0.4	29.6	296	370	±10	±15	12	10	12
470	E	0.4	29.6	296	370	±10	±15	18	12	15
680	H	0.5	42.8	428	535	±10	±15	18	12	15
额定电压**10V**（降额电压**6.3V**）Rated voltage 10V (derated voltage 6.3V)										
1.5	A	8	0.5	5	6.3	±10	±12	8	6	8
2.2	A	8	0.5	5	6.3	±10	±12	8	6	8
3.3	A	6	0.5	5	6.3	±10	±12	8	6	8
4.7	B	3.5	0.5	5	6.3	±10	±12	8	6	8
4.7	A	5	0.5	5	6.3	±10	±12	8	6	8
6.8	B	3.5	0.7	6.8	8.5	±10	±12	8	6	8
6.8	A	4	0.7	6.8	8.5	±10	±15	8	6	8
10	C	1.8	1	10	12.5	±10	±12	8	6	8
10	B	3.5	1	10	12.5	±10	±12	8	6	8
10	A	4	1	10	12.5	±10	±15	8	6	8

续表2 Table 2–Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**10V**（降额电压**6.3V**）Rated voltage 10V (derated voltage 6.3V)										
15	C	1.8	1.5	15	18.7	±10	±12	8	6	8
15	B	2.8	1.5	15	18.7	±10	±12	8	6	8
15	A	6	1.5	15	18.7	±10	±15	12	8	10
22	C	1.8	2.2	22	27.5	±10	±12	8	6	8
22	B	2.4	2.2	22	27.5	±10	±15	8	6	8
22	A	6	2.2	22	27.5	±10	±15	15	10	12
33	E	0.8	3.3	33	41.2	±10	±12	8	6	8
33	C	1.6	3.3	33	41.2	±10	±12	8	6	8
33	B	1.8	3.3	33	41.2	±10	±15	8	6	8
47	E	0.8	4.7	47	58.7	±10	±12	8	6	8
47	C	1	4.7	47	58.7	±10	±15	8	6	8
47	B	1	4.7	47	58.7	±10	±15	12	8	10
68	E	0.8	6.8	68	85	±10	±12	8	6	8
68	C	1.2	6.8	68	85	±10	±15	8	6	8
68	B	3	6.8	68	85	±10	±15	15	10	12
100	H	0.7	10	100	125	±10	±12	10	8	10
100	E	0.7	10	100	125	±10	±12	10	8	10
100	C	1.2	10	100	125	±10	±15	10	8	10
150	H	0.5	15	150	187	±10	±12	10	8	10
150	E	0.5	15	150	187	±10	±15	10	8	10
150	C	0.9	15	150	187	±10	±15	15	10	12
220	H	0.5	22	220	275	±10	±12	10	8	10
220	E	0.5	22	220	275	±10	±15	10	8	10
330	H	0.5	33	330	412	±10	±15	12	10	12
330	E	0.5	33	330	412	±10	±15	15	10	12
470	H	0.2	47	470	587	±10	±15	15	10	12
额定电压**16（15）V**（降额电压**10V**）Rated voltage 16(15)V (derated voltage 10V)										
1.0	A	10	0.5	5	6.3	±10	±12	6	4	6
1.5	A	8	0.5	5	6.3	±10	±12	8	6	8
2.2	A	6	0.5	5	6.3	±10	±12	8	6	8
3.3	B	3.5	0.5	5	6.3	±10	±12	8	6	8
3.3	A	5	0.5	5	6.3	±10	±12	8	6	8
4.7	B	3.5	0.8	7.5	9.4	±10	±12	8	6	8
4.7	A	4	0.8	7.5	9.4	±10	±15	8	6	8
6.8	C	1.9	1.1	10.9	13.6	±10	±12	8	6	8
6.8	B	2.5	1.1	10.9	13.6	±10	±12	8	6	8
6.8	A	3.5	1.1	10.9	13.6	±10	±15	8	6	8
10	C	1.8	1.6	16	20	±10	±12	8	6	8
10	B	2.8	1.6	16	20	±10	±15	8	6	8
10	A	7	1.6	16	20	±10	±15	12	8	10
15	C	1.8	2.4	24	30	±10	±12	8	6	8
15	B	2.5	2.4	24	30	±10	±15	8	6	8

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续表2 Table 2-Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**16（15）V**（降额电压**10V**）Rated voltage 16(15)V (derated voltage 10V)										
22	E	0.8	3.5	35.2	44	±10	±12	8	6	8
22	C	1.6	3.5	35.2	44	±10	±12	8	6	8
22	B	2.2	3.5	35.2	44	±10	±15	9	6	8
33	E	0.8	5.3	52.8	66	±10	±12	8	6	8
33	C	1.2	5.3	52.8	66	±10	±15	8	6	8
47	E	0.8	7.5	75.2	94	±10	±12	8	6	8
47	C	1	7.5	75.2	94	±10	±15	8	6	8
68	E	0.7	10.9	109	136	±10	±12	8	6	8
68	C	1.2	10.9	109	136	±10	±15	12	8	10
100	H	0.7	16	160	200	±10	±12	10	8	10
100	E	0.7	16	160	200	±10	±15	10	8	10
150	H	0.5	24	240	300	±10	±15	10	8	10
150	E	0.7	24	240	300	±10	±15	15	10	12
220	H	0.5	35.2	352	440	±10	±15	15	10	12
额定电压**20V**（降额电压**13V**）Rated voltage 20V (derated voltage 13 V)										
0.68	A	12	0.5	5	6.3	±10	±12	6	4	6
1.0	A	9	0.5	5	6.3	±10	±12	6	4	6
1.5	A	6.5	0.5	5	6.3	±10	±12	8	6	8
2.2	B	3.5	0.5	5	6.3	±10	±12	8	6	8
2.2	A	7	0.5	5	6.3	±10	±12	8	6	8
3.3	B	3	0.7	6.6	8.2	±10	±12	8	6	8
3.3	A	4.5	0.7	6.6	8.2	±10	±15	8	6	8
4.7	C	2.4	0.9	9.4	11.7	±10	±12	8	6	8
4.7	B	3	0.9	9.4	11.7	±10	±12	8	6	8
4.7	A	4	0.9	9.4	11.7	±10	±15	9	6	8
6.8	C	1.9	1.4	13.6	17	±10	±12	8	6	8
6.8	B	2.5	1.4	13.6	17	±10	±15	8	6	8
6.8	A	6	1.4	13.6	17	±10	±15	12	8	10
10	C	1.8	2	20	25	±10	±12	8	6	8
10	B	2.1	2	20	25	±10	±15	8	6	8
15	E	1	3	30	37.5	±10	±12	8	6	8
15	C	1.7	3	30	37.5	±10	±12	8	6	8
15	B	2	3	30	37.5	±10	±15	9	6	8
22	E	0.8	4.4	44	55	±10	±12	8	6	8
22	C	1.2	4.4	44	55	±10	±15	8	6	8
33	E	0.8	6.6	66	82.5	±10	±12	8	6	8
33	C	1.2	6.6	66	82.5	±10	±15	9	6	8
47	H	0.7	9.4	94	117	±10	±12	8	6	8
47	E	0.7	9.4	94	117	±10	±12	8	6	8
47	C	0.9	9.4	94	117	±10	±15	12	8	10
68	H	0.7	13.6	136	170	±10	±12	8	6	8
68	E	0.7	13.6	136	170	±10	±15	8	6	8
100	H	0.5	20	200	250	±10	±15	10	8	10
100	E	0.9	20	200	250	±10	±15	12	8	10
150	H	0.5	30	300	375	±10	±15	15	10	12

续表2 Table 2–Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**25V**（降额电**16V**）Rated voltage 25V (derated voltage 16 V)										
0.33	A	15	0.5	5	6.3	±10	±12	6	4	6
0.47	A	11	0.5	5	6.3	±10	±12	6	4	6
0.68	A	10	0.5	5	6.3	±10	±12	6	4	6
1.0	B	5	0.5	5	6.3	±10	±12	6	4	6
1.0	A	8	0.5	5	6.3	±10	±12	6	4	6
1.5	B	5	0.5	5	6.3	±10	±12	8	6	8
1.5	A	7.5	0.5	5	6.3	±10	±12	8	6	8
2.2	C	3.5	0.6	5.5	6.9	±10	±12	8	6	8
2.2	B	4	0.6	5.5	6.9	±10	±12	8	6	8
2.2	A	7	0.6	5.5	6.9	±10	±15	9	6	8
3.3	C	2.5	0.8	8.2	10.3	±10	±12	8	6	8
3.3	B	3.5	0.8	8.2	10.3	±10	±12	8	6	8
3.3	A	3.7	0.8	8.2	10.3	±12	±20	9	6	8
4.7	C	2.4	1.2	11.7	14.7	±10	±12	8	6	8
4.7	B	3.5	1.2	11.7	14.7	±10	±15	8	6	8
6.8	C	1.9	1.7	17	21.2	±10	±12	8	6	8
6.8	B	2.8	1.7	17	21.2	±10	±15	8	6	8
10	E	1	2.5	25	31.2	±10	±12	8	6	8
10	C	1.5	2.5	25	31.2	±10	±12	8	6	8
10	B	3	2.5	25	31.2	±12	±20	8	6	8
15	E	1	3.8	37.5	46.9	±10	±12	8	6	8
15	C	1.5	3.8	37.5	46.9	±10	±15	8	6	8
22	E	0.8	5.5	55	68.7	±10	±12	8	6	8
22	C	1.4	5.5	55	68.7	±12	±20	9	6	8
33	H	0.7	8.3	82.5	103	±10	±12	8	6	8
33	E	0.7	8.3	82.5	103	±10	±15	8	6	8
47	H	0.7	0.7	117	147	±10	±15	8	6	8
47	E	0.7	0.7	117	147	±12	±20	8	6	8
68	H	0.7	17	170	212	±12	±20	8	6	8
100	H	0.3	25	250	313	±12	±20	12	8	10
额定电压**35（32）V**（降额电压**20V**）Rated voltage 35(32)V (derated voltage 20 V)										
0.10	A	20	0.5	5	6.3	±10	±12	6	4	6
0.15	A	19	0.5	5	6.3	±10	±12	6	4	6
0.22	A	18	0.5	5	6.3	±10	±12	6	4	6
0.33	A	15	0.5	5	6.3	±10	±12	6	4	6
0.47	B	8	0.5	5	6.3	±10	±12	6	4	6
0.47	A	11	0.5	5	6.3	±10	±12	6	4	6
0.68	B	6.5	0.5	5	6.3	±10	±12	6	4	6
0.68	A	8	0.5	5	6.3	±10	±12	6	4	6
1.0	B	5	0.5	5	6.3	±10	±12	6	4	6
1.0	A	7.5	0.5	5	6.3	±10	±12	6	4	6
1.5	C	4.5	0.5	5	6.3	±10	±12	8	6	8
1.5	B	5	0.5	5	6.3	±10	±12	8	6	8
1.5	A	7.5	0.5	5	6.3	±12	±20	9	6	8

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续表2 Table 2-Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	-55℃/+85℃	+125℃	-55℃	+25℃	+85℃/+125℃
额定电压**35（32）V**（降额电压**20V**）Rated voltage 35(32)V (derated voltage 20 V)										
2.2	C	3.5	0.8	7.7	9.6	±10	±12	8	6	8
2.2	B	4	0.8	7.7	9.6	±10	±12	8	6	8
3.3	C	2.5	1.2	11.5	14.4	±10	±12	8	6	8
3.3	B	3.2	1.2	11.5	14.4	±12	±20	8	6	8
4.7	E	1.5	1.6	16.4	20.5	±10	±12	8	6	8
4.7	C	2.2	1.6	16.4	20.5	±10	±12	8	6	8
6.8	E	1.2	2.4	23.8	29.7	±10	±12	8	6	8
6.8	C	1.8	2.4	23.8	29.7	±10	±12	8	6	8
10	H	0.9	3.5	35	43.7	±10	±12	8	6	8
10	E	1	3.5	35	43.7	±10	±12	8	6	8
10	C	1.6	3.5	35	43.7	±10	±15	9	6	8
15	H	0.9	5.3	52.5	65.6	±10	±12	8	6	8
15	E	0.8	5.3	52.5	65.6	±10	±15	8	6	8
22	H	0.7	7.7	77	96.2	±10	±15	8	6	8
22	E	0.7	7.7	77	96.2	±10	±15	8	6	8
33	H	0.6	11.6	11.5	14.4	±10	±15	8	6	8
33	E	0.9	11.6	11.5	14.4	±12	±20	9	6	8
47	H	0.6	16.5	164	206	±12	±20	8	6	8
额定电压**40V**（降额电压**25V**）Rated voltage 40V (derated voltage 25 V)										
0.10	A	20	0.5	5	6.3	±10	±12	6	4	6
0.15	A	19	0.5	5	6.3	±10	±12	6	4	6
0.22	A	18	0.5	5	6.3	±10	±12	6	4	6
0.33	B	10	0.5	5	6.3	±10	±12	6	4	6
0.33	A	15	0.5	5	6.3	±10	±12	6	4	6
0.47	B	8	0.5	5	6.3	±10	±12	6	4	6
0.47	A	11	0.5	5	6.3	±10	±15	6	4	6
0.68	C	7	0.5	5	6.3	±10	±12	6	4	6
0.68	B	7.5	0.5	5	6.3	±10	±12	6	4	6
0.68	A	7.9	0.5	5	6.3	±10	±15	6	4	6
1.0	C	5.5	0.5	5	6.3	±10	±12	6	4	6
1.0	B	7	0.5	5	6.3	±10	±15	6	4	6
1.0	A	6.6	0.5	5	6.3	±10	±15	6	4	6
1.5	C	4.5	0.6	6	7.5	±10	±12	8	6	8
1.5	B	7	0.6	6	7.5	±10	±15	8	6	8
2.2	E	2.5	0.9	8.8	11	±10	±12	8	6	8
2.2	C	3.5	0.9	8.8	11	±10	±12	8	6	8
3.3	E	2.5	1.3	13.2	16.5	±10	±12	8	6	8
3.3	C	3	1.3	13.2	16.5	±10	±12	8	6	8
4.7	E	1.5	1.9	18.8	23.5	±10	±12	8	6	8
4.7	C	3	1.9	18.8	23.5	±10	±15	8	6	8
6.8	E	1.2	2.7	27.2	34	±10	±12	8	6	8
6.8	C	1	2.7	27.2	34	±10	±15	9	6	8

续表2 Table 2–Continued

标称电容量 Rated capacitance μF	外壳代号 Case code	等效串联电阻 ESR max 100KHz 25℃ Ω	直流漏电流DCL max μA			电容量变化范围 Capacitance change range %		损耗角正切 max Dissipation factor max %		
			+25℃	+85℃	+125℃	−55℃/+85℃	+125℃	−55℃	+25℃	+85℃/+125℃
额定电压**40V**（降额电压**25V**）Rated voltage 40V (derated voltage 25 V)										
10	H	1	4	40	50	±10	±12	8	6	8
10	E	1	4	40	50	±10	±15	8	6	8
15	H	1	6	60	75	±10	±15	8	6	8
15	E	1	6	60	75	±10	±15	9	6	8
22	H	0.6	8.8	88	110	±10	±15	12	8	10
额定电压**50V**（降额电压**32V**）Rated voltage 50V (derated voltage 32V)										
0.10	A	20	0.5	5	6.3	±10	±12	6	4	6
0.15	B	16	0.5	5	6.3	±10	±12	6	4	6
0.15	A	15	0.5	5	6.3	±10	±12	6	4	6
0.22	B	14	0.5	5	6.3	±10	±12	6	4	6
0.22	A	18	0.5	5	6.3	±10	±15	6	4	6
0.33	B	10	0.5	5	6.3	±10	±12	6	4	6
0.33	A	15	0.5	5	6.3	±10	±15	6	4	6
0.47	C	8	0.5	5	6.3	±10	±12	6	4	6
0.47	B	8	0.5	5	6.3	±10	±12	6	4	6
0.47	A	9.5	0.5	5	6.3	±10	±15	6	4	6
0.68	C	7	0.5	5	6.3	±10	±12	6	4	6
0.68	B	7.5	0.5	5	6.3	±10	±15	6	4	6
0.68	A	7.9	0.5	5	6.3	±10	±15	6	4	6
1.0	C	5.5	0.5	5	6.3	±10	±12	6	4	6
1.0	B	6	0.5	5	6.3	±10	±15	6	4	6
1.5	E	3.5	0.8	7.5	9.4	±10	±12	8	6	8
1.5	C	4.5	0.8	7.5	9.4	±10	±12	8	6	8
2.2	E	2.5	1.1	11	13.7	±10	±12	8	6	8
2.2	C	3	1.1	11	13.7	±10	±12	8	6	8
3.3	E	2	1.7	16.5	20.6	±10	±12	8	6	8
3.3	C	3	1.7	16.5	20.6	±10	±15	8	6	8
4.7	E	1.4	2.4	23.5	29.4	±10	±12	8	6	8
4.7	C	1.4	2.4	23.5	29.4	±10	±15	9	6	8
6.8	H	1	3.4	34	42.5	±10	±12	8	6	8
6.8	E	1	3.4	34	42.5	±10	±15	8	6	8
10	H	0.7	5	50	62.5	±10	±15	8	6	8
10	E	0.8	5	50	62.5	±10	±15	8	6	8
15	H	0.7	7.5	75	93.7	±10	±15	8	6	8

注Note：1.电容量、损耗角正切测量条件：测量电压：$U_{\sim}=2.2^{0}_{-1.0}$V，$U_{\sim}=1.0^{0}_{-0.5}$V（有效值）；测量频率：（100±5）Hz。
Measuring condition of capacitance and dissipation factor: measuring voltage, $U_{\sim}=2.2^{0}_{-1.0}$V, $U_{\sim}=1.0^{0}_{-0.5}$V（rms）, measuring frequency:（100±5）Hz.

2.漏电流测量条件：施加额定电压测量，充电时间不超过5min（测量125℃漏电流时，施加降额电压测量）。
DCL measuring condition: rated voltage is applied. Charging time does not exceed 5 minutes(when measuring leakage current at 125℃,derated voltage is applied).

3.等效串联电阻（ESR）测量条件：测量频率：（100±5）KHz；$U_{\sim}=2.2^{0}_{-1.0}$V，$U_{\sim}=1.0^{0}_{-0.5}$V（有效值）。
ESR measuring condition: measuring frequency:（100±5）KHz；$U_{\sim}=2.2^{0}_{-1.0}$V，$U_{\sim}=1.0^{0}_{-0.5}$V (rms).